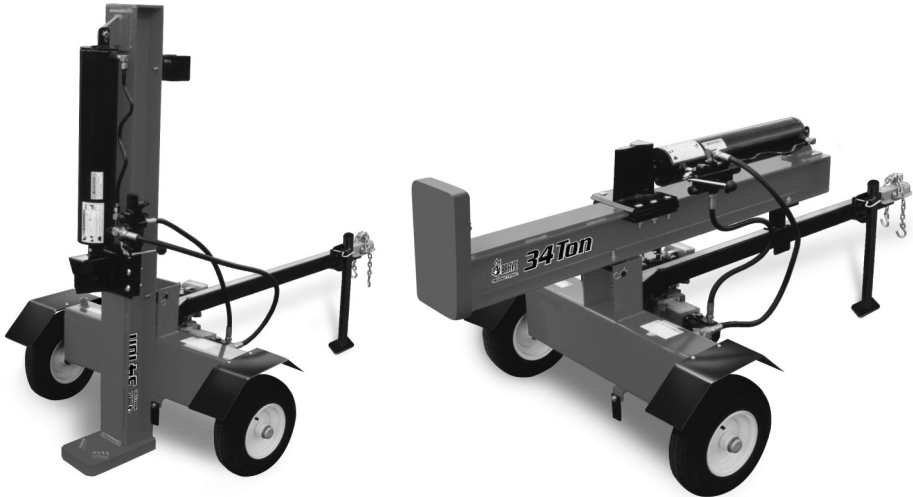


See
initial start-up
instructions on page one



Brave 34 Ton **Vertical / Horizontal** **Log Splitter**

Model VH9934



Brave Products, Inc.
410 W. Broadway Ave.
Streator, Illinois 61364-0577
Phone: 815-672-8861 Fax: 815-672-9073
E-mail: sales@braveproducts.com

Web Site: www.braveproducts.com

Owner / Operator **and Safety Manual**

VH9934-01



Initial Start-up Instructions

- ☐ Read all assembly, operating, and safety instructions.
- ☐ Complete and return the warranty card to register your log splitter.
- ☐ Write the serial number and date-of-purchase in this manual.
- ☐ Assemble the log splitter.
- ☐ Fill the hydraulic tank with the recommended type and quantity of oil. (See "Start-Up Procedure" section.)
- ☐ Fill the engine crankcase with the manufacturer's recommended type and quantity of oil. (See "Start-Up Procedure" section.)
- ☐ Fill the engine fuel tank with fresh, clean, **lead-free** gasoline. (Do not mix oil with gasoline.)
- ☐ Bleed the air out of the cylinder before starting the log splitter. (See "Start-Up Procedure" section.)
- ☐ Make sure the trailer hitch of the towing vehicle is equipped with a 2 inch ball.

Serial Number _____

Date-of-Purchase _____

Please enter the serial number and purchase date of your log splitter in the space provided. Keep this manual for future reference.

IRON & OAK

BRAVE
PRODUCTS, INC.
Streator, IL

SERIAL No.

Made in U.S.A.

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Important Warranty Information

To activate your Brave log splitter warranty, please fill out the information in the form below, clip out the form on the dotted line, insert into an envelope, and mail to:

Brave Products, Inc
P.O. Box 577
Streator, IL 61364-0577

Brave Log Splitter Warranty Information

- Please Print -

Model: VH9934 SERIAL #: _____

OWNER'S NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

Purchased From: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Your Signature: _____ Date: _____

Warranty

For one year from the date of purchase, Brave Products Inc. will replace for the original purchaser or repair free of charge all parts of the Brave Products Hydraulic Log Splitter returned to our factory PREPAID and found upon inspection by us to be faulty due to defects in materials or workmanship.

The warranty shall not apply to any unit which has been overloaded or misused or which has been installed, used, or operated contrary to our instructions, or which has been repaired or altered by anyone other than our authorized representative.

We shall not be liable for any contingent liabilities arising out of the improper function of any parts.

We make NO WARRANTY with respect to parts NOT of our manufacture, but we will carry out the terms of the warranties of their respective manufacturers.

For commercial and rental use the warranty period is for 30 days from date of purchase.

If a service representative cannot be found in your area, call Brave Products at (815) 672-8861. Have your model and serial number on hand before calling.

WARNING



To avoid personal injury or death, carefully read and understand all instructions pertaining to the Brave Products' log splitter.

Do not attempt to assemble, operate, or maintain our product without fully understanding all our instructions and safety precautions. Do not operate the log splitter unless you read and understand the instructions and warnings in this manual. If any doubt or question arises about the correct or safe method of performing anything found in this or other Brave Products' manuals, contact your Brave Products' dealer or call the Sales and Service representatives at our main headquarters. Proper care is your responsibility.

WARNING

Accidents can often be avoided by being alert and recognizing potentially hazardous situations. Any individuals operating, maintaining, or repairing products manufactured by Brave Products should have the necessary training, skills, and tools required to perform these functions properly and safely. The safety information in this manual serves as a basic guide in an attempt to prevent injury or death.

Brave Products cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this manual and on the product itself are, therefore, not all inclusive. If tools, procedures, work methods, or operating techniques that are not specifically mentioned by Brave Products are used, you must satisfy yourself that they are safe for you and for others. Make sure the log splitter will not be damaged or made unsafe by any operation, lubrication, maintenance, or repair procedures that you choose.

DO NOT proceed, if any doubt arises about the correct or safe method of performing anything found in this or other Brave Products' manuals. Seek out expert assistance from a qualified person before continuing.

WARNING

CALIFORNIA PROPOSITION 65

Engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Introduction

This professional quality, VH9934 Vertical/Horizontal Log Splitter, is designed for tough applications in both vertical and horizontal positions. With 34 tons of splitting force, a 15 second cycle time, and a 8 HP engine the VH9934 will handle most of your log splitting needs. An attractive powder-coated finish provides the finest protection available, and Brave's rigid, quality-control and component testing help ensure years of productive, reliable service. Since 1982, the name Brave has stood for quality and reliability when it comes to log splitters and wood processing products.

Brave Products offers the finest log splitter on the market today!

- ✓ Rugged, heavy-duty construction for years of exceptional service.
- ✓ Ergonomic design for use in vertical and horizontal operating positions.
- ✓ Rigid, quality-control during manufacturing ensures greater reliability.
- ✓ Factory testing of all major components and hydraulic tank.
- ✓ Powder-coated finish for the best appearance and weather protection.
- ✓ Year-round manufacturing, parts, and support.








For additional information, contact us at:

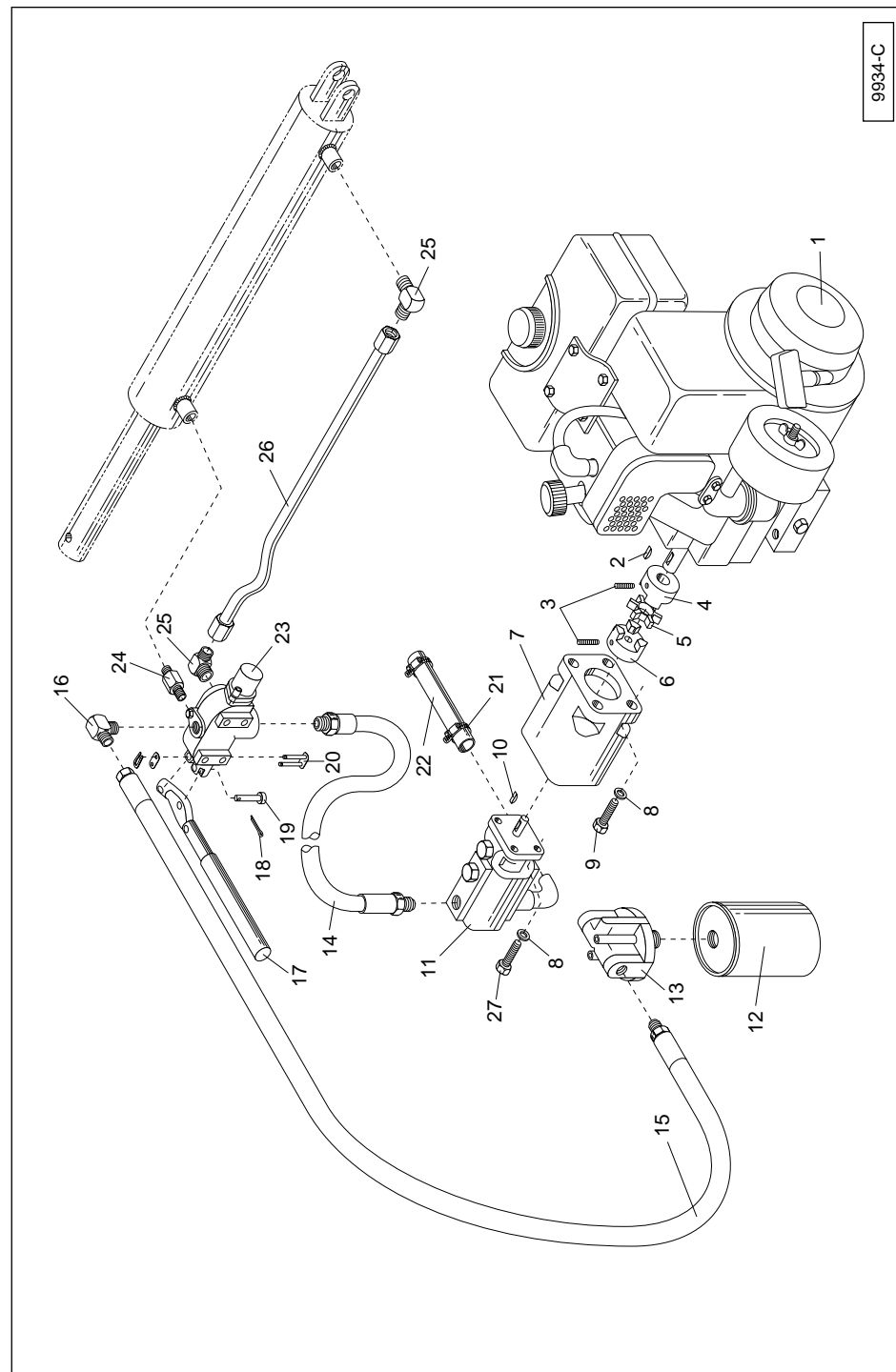
Brave Products, Inc.
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Streator, Illinois 61364-0577
Phone: (815) 672-8861
Fax: (815) 672-9073
E-mail: sales@braveproducts.com
Web Site: www.braveproducts.com

Safety

The following is a list of safety rules you must follow in order to use your log splitter safely.








Personal Protection

- ✓  To avoid personal injury or death, carefully read and understand all instructions pertaining to the log splitter including the engine manufacturer's operating and maintenance instruction manual.
- ✓      Always wear protective gear such as safety goggles, tight-fitting gloves without draw strings or loose cuffs, steel-toed shoes and a protective hearing device.
- ✓  To prevent injury, make sure all decals are attached to the log splitter and are legible at all times.

















Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	BR003008	Engine, Briggs 8	1	25	BR004002K	Fitting, 90° Elbow	2
2	BR010105	Key, Engine Shaft	1	26	BR004119	Line, Steel	1
3	BR001382	Screw, Set 5/16-18	2	27	BR001209	Bolt, 5/16-18 x 3/4"	4
4	BR006001C	Coupling, Engine	1				
5	BR006001B	Spider	1				
6	BR006001D	Coupling, Pump	1				
7	BR020110	Flange, Engine	1				
8	BR001402	Washer, Lock	8				
9	BR001265	Bolt, 5/16-24 x 1"	4				
10	BR002002BK	Key, Pump Shaft	1				
11	BR002002B	Pump, Hydraulic	1				
12	BR001113	Element, Filter	1				
13	BR001112	Casting, Head Filter	1				
14	BR005061	Hose, High Pressure	1				
15	BR005036	Hose, High Pressure	1				
16	BR001017	Fitting, High Pressure 90°	1				
17	BR004117A	Handle, Valve	1				
18	BR004215	Pin, Cotter, 3/32 x 1/2"	1				
19	BR004214	Pin, Clevis, 1/4 x 1"	1				
20	BR004165	Master Link	1				
21	BR004999	Clamp, Hose No. 1	2				
22	BR005080	Hose, Low Pressure 1 x 9"	1				
23	BR004117	Valve	1				
24	BR001052	Fitting, Straight	1				

Worksite Safety





- ✓  To avoid tripping, do not leave tools, logs, or other components laying around in the work area.
- ✗  NEVER operate your log splitter on slippery, wet, muddy, or icy surfaces. The location you choose should be flat, dry, and free from any tall grass, brush, or other interferences.
- ✗  NEVER operate the engine in an enclosed area. Exhaust fumes contain carbon monoxide which can be deadly when inhaled. Make sure the area is well ventilated.
- ✗  NEVER attempt to move your log splitter over hilly or uneven terrain without a tow vehicle.
- ✗  NEVER use your log splitter at night.
- ✓  ALWAYS operate your log splitter on dry, solid, level ground.
- ✓  ALWAYS block the wheels to prevent movement of the machine while in operation.

Operating Safety



- ✓  ALLOW ONLY ONE (1) PERSON TO LOAD AND OPERATE THE LOG SPLITTER.
- ✓  Allow only adults to operate the log splitter.
- ✓  Always keep bystanders, including children and pets, at least twenty-five (25) feet away from the work area. Only the operator should stand near the equipment, and the operator should stand only within the safety zone prescribed in this manual (see the photos on safe and unsafe operating zones in the "Operation" section.)
- ✓  When the ram of the log splitter is in the return mode, keep your hands off the machine — the log splitter is designed to automatically stop when the cylinder is fully retracted.
- ✓  ALWAYS disconnect the spark plug wire when the log splitter is not in operation.
- ✗  Do not allow any person to operate the log splitter until they have read and understood the safe operating instructions contained in this manual.

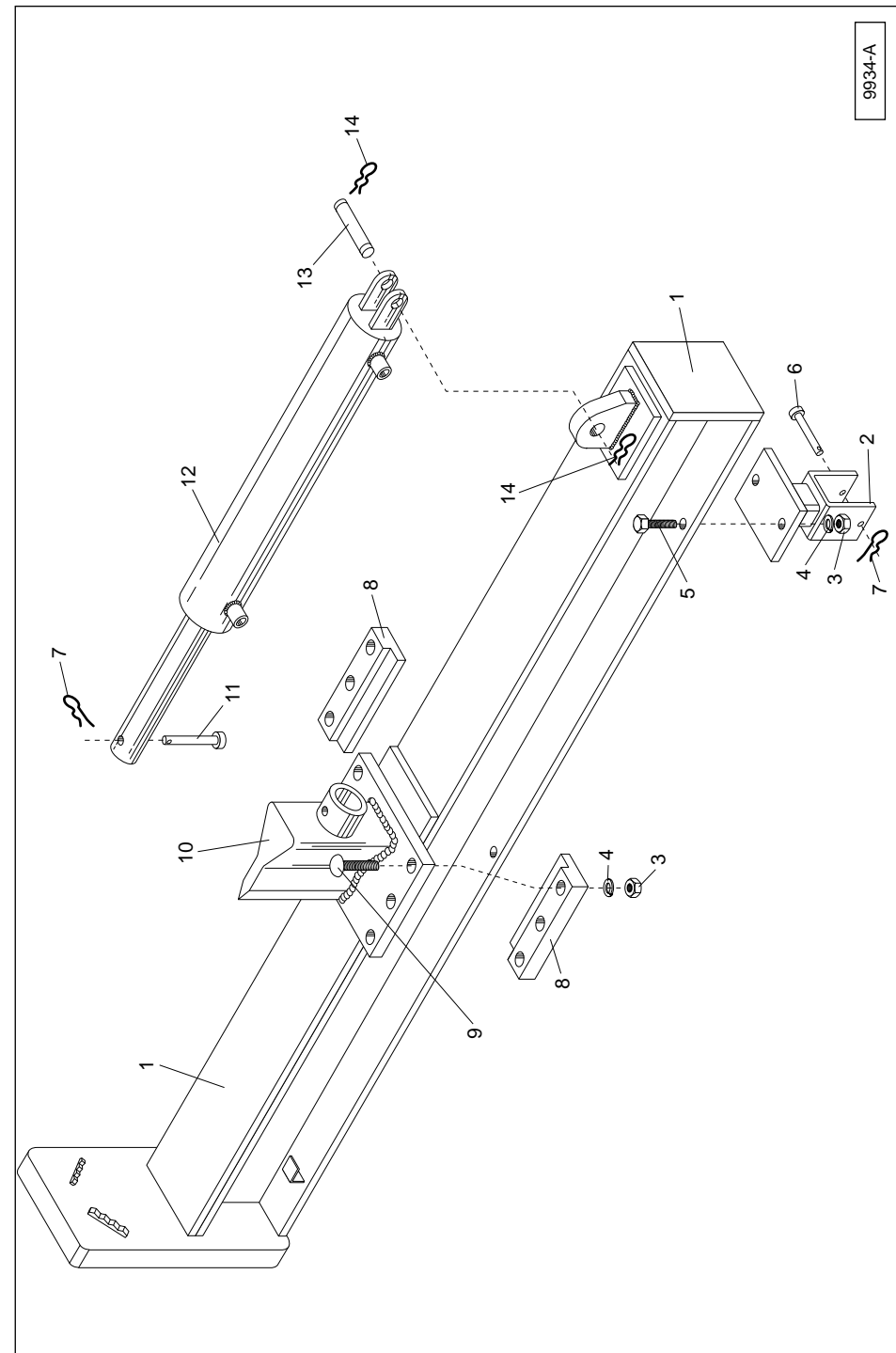
- ✗  Do not, under any circumstances, alter your log splitter. This equipment was designed and engineered to be used in accordance with the operating instructions. Altering the equipment, or using the equipment in such a way as to circumvent its design capabilities and capacities, could result in serious or fatal injury and **WILL VOID THE WARRANTY**.
- ✗  Never operate, or allow anyone else to operate, this equipment while under the influence of medication, drugs, or alcohol.
- ✗  Never wear loose clothing or jewelry that may get caught or become entangled in the log splitter.
- ✗  **NEVER** place hands or feet between log and splitting wedge or between log and ram during the forward or reverse stroke.
- ✗  **DO NOT STRADDLE OR REACH ACROSS THE SPLITTING AREA WHEN OPERATING THE LOG SPLITTER.**
- ✗  Do not step over your log splitter when the engine is running, because you may trip or accidentally engage the ram.
- ✗  **NEVER** attempt to load your log splitter while the ram is in motion.
- ✗  Only use your hand to operate the control lever. **NEVER** use your foot, knee, a rope, or any other extension device.

Log Splitting Safety







- ✓  Always keep your fingers away from any cracks that open in the log during the splitting operation.
- ✓  **ALWAYS** make sure that both ends of the log you are splitting are cut as square as possible. This will prevent the log from sliding out of position while under pressure. Logs should be 24 inches or shorter in length.
- ✗  **NEVER** try to split two logs on top of each other.
- ✗  Never pile logs to be split in a manner that will cause you to reach across the log splitter.

Maintenance and Repair









- ✓  Follow all safety rules, because most accidents involving the operation, maintenance, or repair of products occur because the assembler/owner/operator failed to observe basic safety rules or operating instructions.
- ✓  **ALWAYS** inspect your log splitter before each use. Make sure all nuts, bolts, screws, hydraulic fittings, hose clamps, etc. are securely tightened.












Item	Part No.	Description	Qty
1	BR021266	Weldment, Rail	1
2	BR021393	Weldment, Rail Rest	1
3	BR001304	Nut, Hex 1/2-13	8
4	BR001404	Lockwasher 1/2"	8
5	BR001208	Bolt, 1/2-13 x 1-1/2"	2
6	BR001493	Pin, Clevis 5/16 x 3"	1
7	BR001761	Clip, Hairpin 3/32 x 1-3/4"	2
8	BR014271	Casting, Slide	2
9	BR001277	Bolt, Carriage 1/2-13 x 2-1/2"	6
10	BR021163	Weldment, Slide Wedge	1
11	BR001765	Pin, Clevis 1/2 x 2-3/4"	1
12	BR004056	Cylinder	1
13	BR008531A	Pin, Grooved 1"	1
14	BR001705	Clip, Hairpin (Cylinder)	2

- ✓  ALWAYS check the oil level in the hydraulic oil tank and engine reservoir.
- ✗  NEVER operate your log splitter when it's in need of repair or is in poor mechanical condition.
- ✗  NEVER tamper with the engine to run it at excessive speeds. The maximum engine speed is preset and is within safety limits.
- ✗  NEVER make alterations to your log splitter in any manner. Such alterations may cause the log splitter to become unsafe and WILL VOID THE WARRANTY.
- ✗  NEVER attach a rope or extension to the control lever or add width or height to the splitting wedge. Such ALTERATIONS may cause the log splitter to become UNSAFE and WILL VOID THE WARRANTY.
- ✗  ALWAYS clean the unit after each use. If possible, store the unit inside or cover it completely, if stored outside.



Towing

- ✓  ALWAYS check before towing to make certain your log splitter is correctly and securely attached to the towing vehicle. Be sure that the ball hitch you are using is the proper size for the hitch coupler on the log splitter (see "Specification" section). Be sure the safety chains are properly hooked to the vehicle leaving enough slack for turning.
- ✓  ALWAYS allow for added length of the log splitter when turning, parking, crossing intersections, and in all driving situations.
- ✓  ALWAYS be careful when backing up. You could jackknife your log splitter if care is not taken.
- ✓  ALWAYS disconnect your log splitter from your towing vehicle before attempting to use it.
- ✗  NEVER exceed 35 m.p.h. when towing your log splitter. Obey all state and local regulations when towing on state and local roads and highways. Adjust your speed for terrain and conditions as needed. Be extra cautious when towing over rough terrain, especially over a railroad crossing.
- ✗  NEVER tow your log splitter when there is fuel in the engine's tank.
- ✗  NEVER allow anyone to sit or ride on your log splitter.
- ✗  NEVER carry any cargo or wood on your log splitter.

Refueling

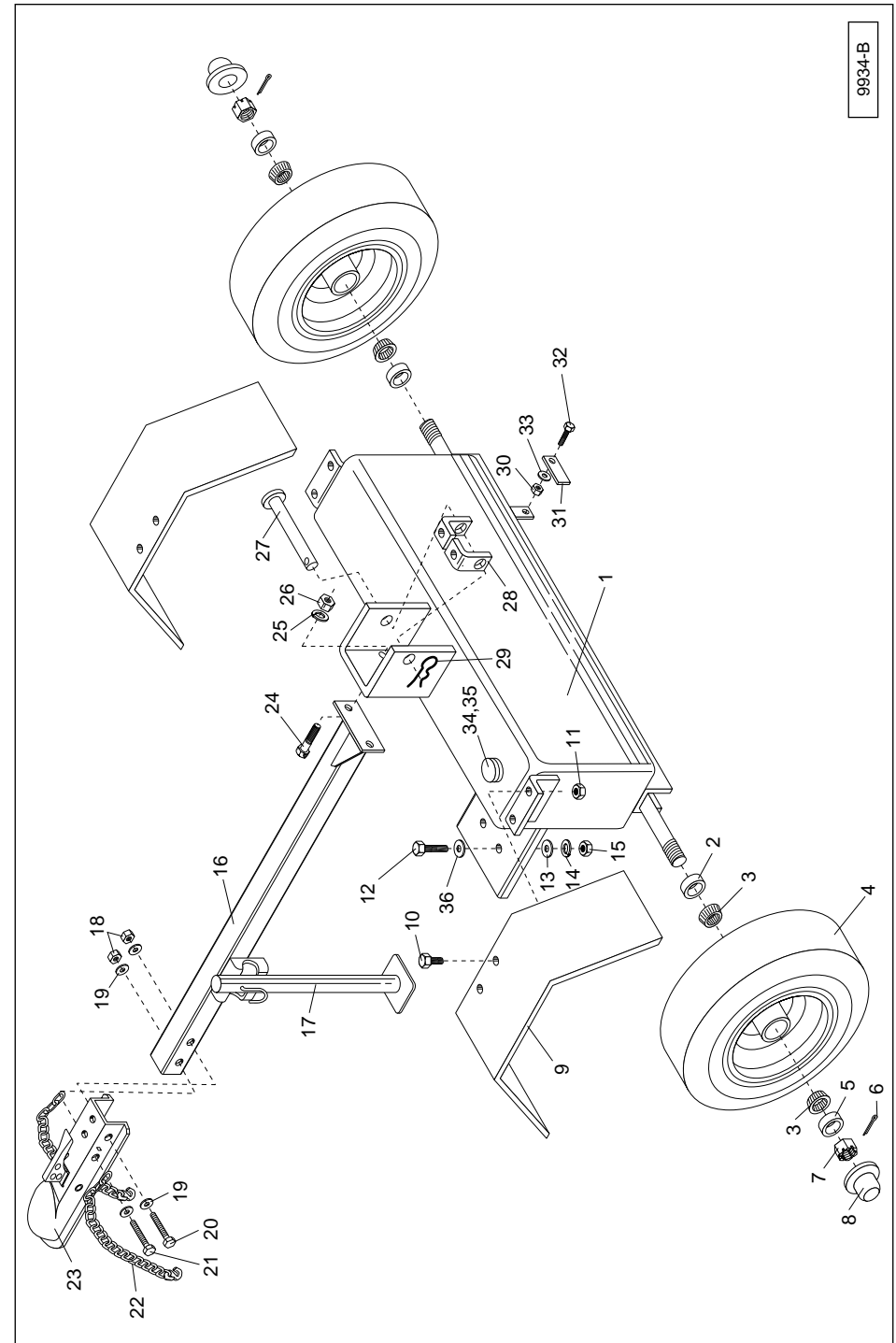
- ✓  ONLY refuel the log splitter outdoors in a clear area void of gas fumes or spilled gasoline.
- ✓  ALWAYS use an approved fuel container to carry gasoline.
- ✓  ALWAYS replace the log splitter gas cap and the fuel container cap securely.
- ✓  If gasoline is spilled, move the machine away from the area of the spill and avoid creating any source of ignition until the spilled gasoline has completely evaporated.
- ✓  Take a class B fire extinguisher with you when operating the log splitter in dry areas as a precautionary measure against possible flying sparks.
- ✓  Always store gasoline in an approved, tightly sealed container. Store the container in a cool, dry place. Do not store the container in a house or near any heating appliance.
- ✗   Do not smoke or have open flames when refueling the engine. Do not spill fuel. If fuel should spill, quickly wipe up the spill and allow the excess to evaporate before continuing. Make sure gasoline soaked rags are properly disposed of.
- ✗  DO NOT fill the gas tank while the engine is hot or running. Allow time for the engine to cool down before refueling.

Preventing Fires

- ✘  NEVER operate the log splitter near a flame or spark. Oil and gasoline are flammable and can explode.
- ✘  NEVER smoke while operating or refueling the log splitter. Gasoline, oil, and even gas fumes can explode.

Important Notice

The log splitter is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered, or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the owner and/or operator.



Parts Section

Item	Part No.	Description	Qty
1	BR021249	Weldment, Base	1
2	BR008301B	Seal, Inside	2
3	BR008301A	Bearing, Tapered Roller	4
4	BR008301	Tire, 4.8" x 8"	2
5	BR008301D	Washer, Thrust	2
6	BR008301F	Key, Cotter 1/8"	2
7	BR008301E	Nut, Spindle	2
8	BR008301G	Dust Cap	2
9	BR007003	Fender	2
10	BR001202	Bolt 5/16-18 x 1"	4
11	BR001325	Locknut, 5/16"	4
12	BR001207	Bolt, 5/16-18 x 2"	4
13	BR001401	Washer, Flat 5/16"	4
14	BR001402	Lockwasher 5/16"	4
15	BR001303	Nut, Hex 5/16-18	4
16	BR021394	Weldment, Tongue	1
17	BR020284	Weldment, Front Leg	1
18	BR001301	Locknut 3/8-16	2
19	BR001400	Washer, Flat 3/8"	4
20	BR001218	Bolt 3/8-16 x 3"	1
21	BR001260	Bolt, 3/8-16 x 3-1/2"	1
22	BR008508	Chain Assembly	2
23	BR008540	Coupler, Hitch 2"	1
24	BR001208	Bolt, 1/2-13 x 1-1/2"	2
Item	Part No.	Description	Qty
25	BR001404	Lockwasher 1/2"	2
26	BR001304	Nut, Hex 1/2-13	2
27	BR021251	Pin, Hinge	1
28	BR014188	Ear, Hinge	2
29	BR001761	Clip, Hairpin 3/32 x 1-3/4"	1
30	BR001304	Locknut 3/8-16	1
31	BR014077	Plate, Vertical Latch	1
32	BR001251	Bolt 3/8-16 x 1-1/2"	1
33	BR001400	Washer, Flat 3/8"	4
34	BR001022	Plug, Fill Vented	1
35	BR001025	O-ring, Fill Plug	1
36	BR001345	Washer, Neoprene 5/16"	4

Assembly Instructions

Required Tools

- 10" crescent wrench
- Flat head screwdriver
- Two 1/2" open end wrenches
- Two 9/16" open end wrenches
- Two 3/4" open end wrenches
- Funnel
- Pliers

Shipping List

The following chart contains the list of parts that should be shipped as part of the VH9934 Log Splitter.

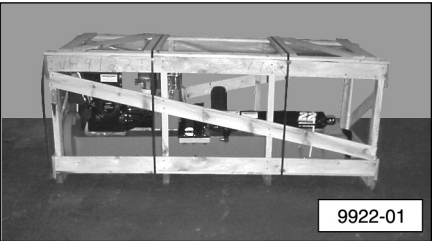
Qty	Description	Qty	Description
1	Base Unit (engine) ¹	4	Nuts (1/2-13) ²
1	Rail Unit (hydraulic cylinder) ¹	1	Clevis Pin (5/16 x 3") ²
Hitch Assembly Parts		1	Hairpin Clip (3/32 x 1-34") ²
1	Hitch Assembly (2 inch) ²	Rail Latch Assembly	
1	Bolt (3/8-16 x 3 inch) ²	1	Rail Latch (flat steel plate) ²
1	Bolt (3/8-16 x 3-1/2 inch) ²	1	Bolt (3/8-16 x 1-1/2 inch) ²
4	Flat Washers (3/8) ²	1	Flat Washer (3/8) ²
2	Locknuts (3/8-16) ²	1	Locknut (3/8-16) ²
2	Safety Chains ²	Valve Assembly	
Tongue and Front Leg Assembly		1	Control Lever (valve) ²
1	Tongue and Front Leg Weldment ¹	1	Connecting Link ²
2	Bolts (1/2-13 x 1-1/2 inch) ²	Fender Assembly	
2	Lockwashers (1/2") ²	2	Fenders ²
2	Nuts (1/2-13) ²	8	Bolts (5/16-18 x 1 inch) ²
Rail to Base Assembly		8	Locknuts (5/16-18) ²
1	Rail Rest Weldment ²		
4	Bolts (1/2-13 x 1-1/2 inch) ²		
4	Lockwashers (1/2") ²		

¹ On the pallet.

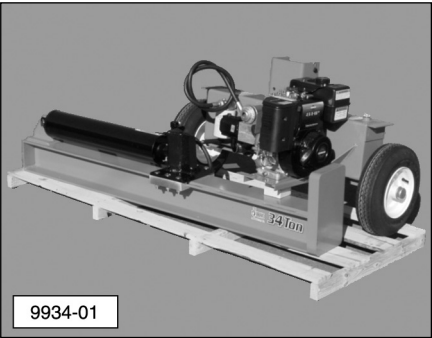
² In cardboard box.

Unpacking the Crate

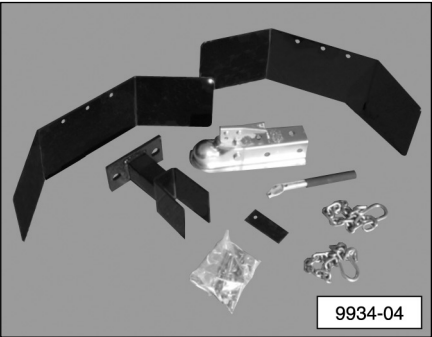
1. Cut the metal banding and remove the top, sides, ends, and protective plastic covering of the packing crate. Do not remove the base unit or the rail assembly from the bottom pallet at this time.



2. Carefully check the larger components on the shipping pallet for damage. If the parts are damaged call Brave Products at (815) 672-8861.



3. Cut all of the banding straps and open the cardboard box to make sure all the smaller parts have been shipped. The chart in the “Shipping List” section provides a complete list of all the parts shipped with your log splitter. If any parts are missing call Brave Products at (815) 672-8861.



NOTE: The contents of the cardboard box contains the hitch assembly, valve handle, two safety chains, two fenders, rail rest assembly, rail latch plate, and one bag of hardware, as shown.

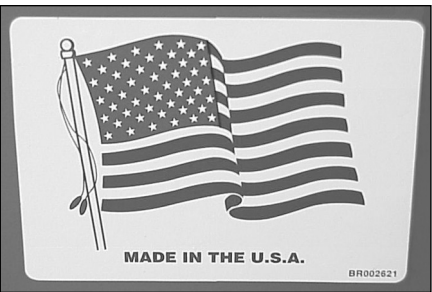
(6)



(8)



(7)



Item	Part No.	Description	Qty.
1	BR002652	Decal, Notice	1
2	BR002665	Decal, Warning Engine	1
3 (NS)	BR002625	Decal, VH9934 Logo	1
4	BR002555	Decal, Caution	1
5	BR002558	Decal, Warning	1
6	BR002557	Decal, Caution	1
7	BR002621	Decal, Flag	1
8	BR002521	Decal, Serial Number	1

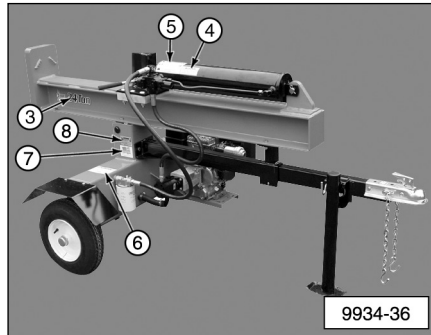
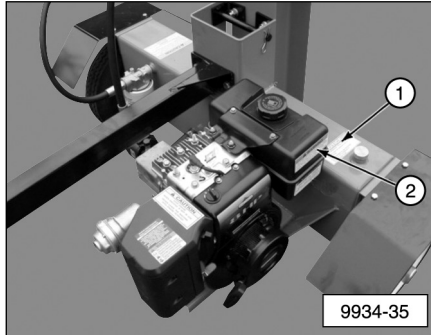
NS - not shown

Decals

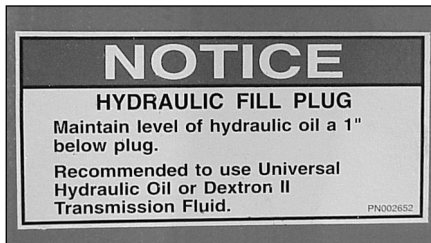
WARNING



Make sure all decals are attached to the log splitter and/or engine and are legible at all times.



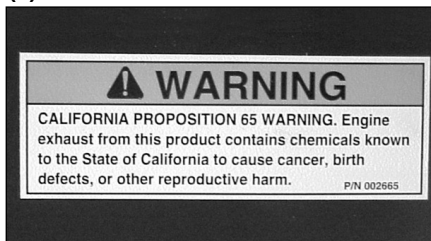
(1)



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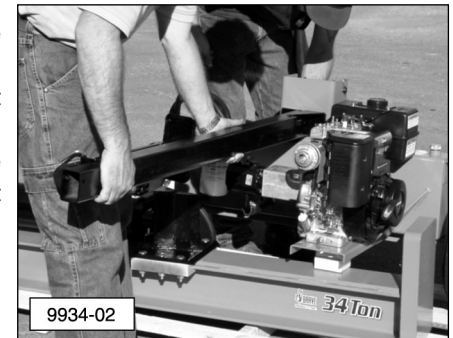
Assembly Procedure

CAUTION



Some components are very heavy and can be damaged if mis-handled. Also, to help prevent personal injury, it is strongly recommended that two (2) people work together to uncrate and assemble the log splitter.

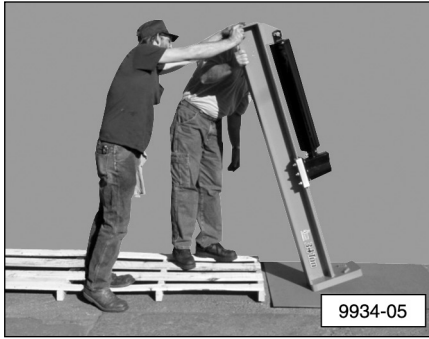
1.  Remove and read all instructions and safety recommendations before assembling or operating this log splitter.
2. Before removing the base unit from the pallet, remove the tongue and front leg assembly and install it to the base unit using two 1/2-13 x 1-1/2 inch hex head bolts, lockwashers, and nuts. Tighten the nuts securely. Roll the tongue/base unit off the pallet.



3. Carefully stand the rail assembly in an upright, vertical position.

⚠ WARNING

Make sure the rail assembly is standing on a flat, level area. If necessary, have a helper steady the rail to prevent it from tipping over. The rail assembly weighs approximately 300 pounds and will cause bodily injury if it falls on someone.



4. Lower the front leg and lock it into position. Carefully align the hinge brackets in the base unit with the holes in the rail assembly.



Have someone hold the rail assembly to prevent it from falling during this part of the assembly.



5. Bolt the base unit to the rail assembly using two 1/2-13 x 1-1/2 inch long hex head bolts, lockwashers and nuts as shown. Tighten the nuts securely.



6. Bolt the rail rest to the rail assembly using two 1/2-13 x 1-1/2 inch long hex head bolts, lockwashers, and nuts as shown. Tighten the nuts securely.



Notes

Troubleshooting

The following section will detail procedures for checking your log splitter, should you encounter a malfunction. Brave Products, Inc. recommends that you do not attempt to make repairs to the log splitter. In the long run, it is better to take your log splitter to a servicing lawn and garden dealer for repairs.

Problem: When the control handle is pushed forward (extend), the wedge does not move.

1. Check the hydraulic tank to make sure the oil level is one inch from the top of the tank.
2. Remove the pump from the engine flange. Check the coupler, making sure the drive keys are in place and there is no damage to the blue urethane spider.
3. Disconnect the wedge from the cylinder. Grasp the hydraulic cylinder shaft and try to pull it out. If the rod comes out easily, you will need to rebuild or replace the cylinder.
4. Once you have determined that the engine to pump coupler is intact and the cylinder is in good condition you will need to replace the pump.

Problem: The engine stalls when the wedge engages the wood.

1. The engine may not be properly adjusted. Take the engine to a service center for repair and/or adjustment.
2. If all engine settings are correct, replace the pump.

Problem: The wedge moves slowly, but will split wood.

1. Replace the hydraulic system oil filter.
2. Check the oil filter housing for dirt and debris that may have obstructed the openings.
3. If the ram speed is still slow, replace the pump.

Problem: The ram will not automatically retract.

1. Check the slide rail or wedge assembly for damage.
2. Push the valve handle to the retract position. If the handle will not stay in this position, replace the valve assembly.

7. Bolt the rail latch plate to the base unit using a 3/8-16 x 1-1/2 inch long hex head bolts, flat washer, and locknut as shown.

Do not overtighten the locknut. The rail latch should rotate freely.

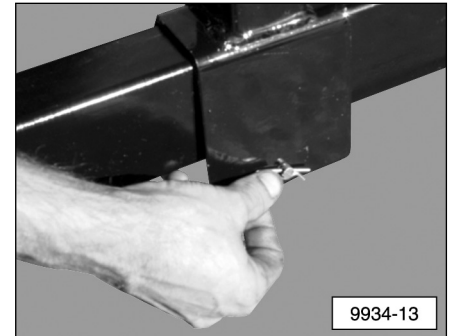


8. Carefully lower the rail assembly to a horizontal position.

NOTE: Block the wheels to prevent the base unit from moving.



9. Insert the clevis pin through the rail rest and secure it with a hair pin clip on the opposite side.



10. Attach the hitch coupler to the end of the tongue and front leg assembly (rear hole) using a 1/2-13 x 3 inch long bolt, two flat washers, and a 1/2-13 locknut. Tighten the locknut securely.



- Attach the two towing safety chains to the hitch (front hole) using a 3/8-16 x 3-1/2 inch long hex head bolt, two flat washers, and a locknut. Tighten the locknut securely.

NOTE: The safety chain should be installed against the hitch assembly with the flat washers on the outside of the chain, as shown.

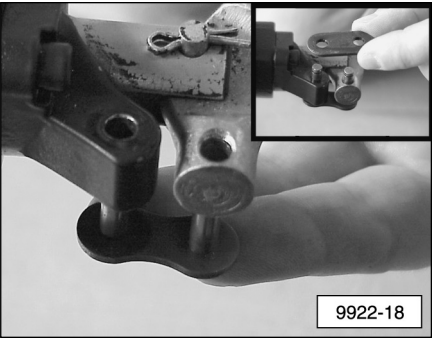


- Assemble the control handle to the valve body. First remove the cotter pin and valve handle pin. Then, place the flat portion of the handle into the slot of the valve spool. Install the 3/16 x 1 inch pin through the holes. Secure the pin with a cotter pin (bend the cotter pin to make it secure).



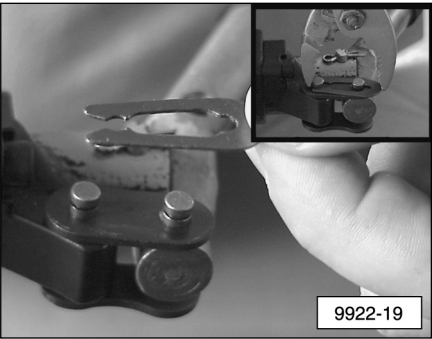
- Install the master link through the hole in the valve body and the hole in the handle.

Put the top master link over the protruding posts.



- Install the master link clip over one of the protruding posts and align the open end with the groove on the opposite post.

Press the master link clip onto the chain link post. Make sure the clip is securely fastened in the grooves of the post.



Specifications

Mechanical Specifications

Slide Rail	6 x 6 inch reinforced, heavy-duty H-beam
Wedge	High carbon steel, compound angle
Force/Tonnage	34 ton
Cylinder Stroke	24 inches
Log Opening	25 inch maximum
Cycle Time	15 seconds (approx.)
Operating Positions	Vertical/Horizontal
Wheels & Tires	High-Speed, 4.80 x 8"
Safety Chains	Standard
2" Hitch Coupler	Standard
Engine	8 HP horizontal shaft engine (Briggs & Stratton, Tecumseh, or Honda)

Hydraulic Specifications

Cylinder Size	5 x 24 inch, clevis type cylinder with 2.0 inch rod
Hydraulic Tank	9 gallons
Hydraulic Oil Filter	Spin-on, 25 micron filter
Safety Release Control Valve	Detent, auto return
Gear Pump	2-stage, 16 GPM
Unit Weight	560 lbs.
Shipping Weight	620 lbs.
Overall Shipping Size (H x W x L)	31.5 x 28 x 78 inches

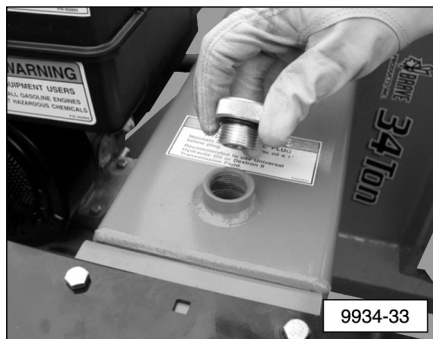
Replacement Filters

Replacement Filters	NAPA 1553
	FRAM PF1654
	WIX 51552

Hydraulic Oil Specifications (non foaming)

Tractor Hydraulic Oil	
For extremely cold weather conditions	SAE 10W
For extremely warm weather conditions	SAE 30W
Transmission Fluid	Dextron III

- c. Remove the hydraulic tank fill cap and fill the tank with the recommended type and quantity of oil. Replace the cap.
- d. Hold the valve handle in the extend position and pull the engine pull start cord until the rod is fully extended. This step pumps oil into the cylinder.
- e. Replace the spark plug and spark plug wire.
- f. Start the engine and cycle the cylinder several times.
- g. Retract the cylinder and shut off the engine.
- h. Recheck the hydraulic tank to make sure oil is filled within one inch from the top of the tank.



- 15. Attach the high-pressure hose from the filter assembly to the top valve fitting. Securely tighten the hose fitting.

NOTE: The high-pressure hose is self-sealing and does not require any type of sealing material. Tighten the fitting with the 10 inch crescent wrench.



- 16. Attach the other high-pressure hose from the bottom valve fitting to the pump. Securely tighten the hose fitting.

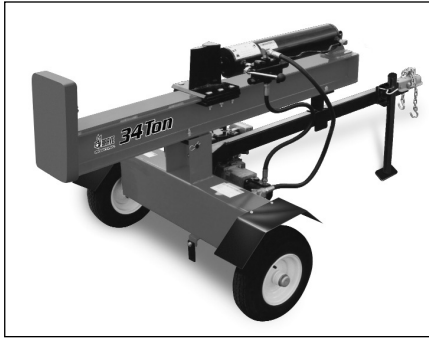
NOTE: The high-pressure hose is self-sealing and does not require any type of sealing material. Tighten the fitting with the 10 inch crescent wrench.



- 17. Bolt the fenders onto the fender brackets using two 5/16-18 x 1 inch long hex head bolts and 5/16-18 locknuts. The fenders are interchangeable (left or right). Position the fender over the tire with equal spacing in the front and back.



18. The log splitter is now completely assembled. Follow the “Start-Up Procedure” in the following section, which adds oil to the engine and hydraulic tank before trying to start the engine.



Hydraulic Oil Change

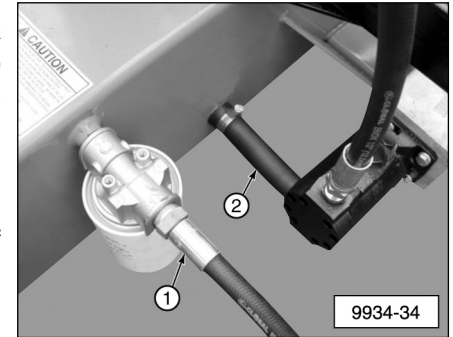
Brave Products recommends an oil and filter change every 100 hours of operation. Refer to the “Specifications” section in this manual for the type and quantity of oil.

Important Notice

Never run the log splitter unless the hydraulic oil tank is full.

1. Drain the cylinder.

- Remove the spark plug wire and spark plug to help reduce the back pressure on the engine and to prevent it from starting.
- Disconnect return hose (1) from the oil filter housing and place it in a waste oil container. (Please properly dispose of the waste oil per local regulations.)
- Extend the cylinder by holding the valve handle forward and pulling on the engine's pull start cord until oil from the return line stops flowing.



2. Drain the hydraulic tank.

- Place a waste oil container under the inlet hose.
- Remove inlet hose (2) from the tank.
- Slightly raise the front of the log splitter to completely drain the tank.

3. Refill the hydraulic tank.

- Reconnect the inlet hose to the pump.
- Reconnect the return hose to the oil filter.

Inspection and Maintenance

General Maintenance Check (before operating)

The hydraulic system (hoses, cylinder, and pump) should be carefully inspected before each use. Also inspect the mechanical parts at the same time. Make sure all hoses, clamps, nuts, bolts, fittings, etc. are properly installed and tightened.

WARNING



Do not check for leaks with your hand. Leaks can be located by passing a piece of cardboard or wood around the suspected leak and looking for discoloration. High-pressure fluid escaping from a very small hole can be almost invisible. Escaping fluid under pressure can have sufficient force to penetrate skin, causing serious injury or even death. If fluid is injected into your skin, it must be treated immediately by a doctor familiar with this type of injury.

Always replace frayed, kinked, or cracked hoses and/or other damaged hydraulic components with Brave Products authorized parts and components specified in the "Parts" section of this manual. Replacement parts from secondary suppliers (not original Brave replacement parts) can lead to product damage and/or personal injury, and will void the warranty.

CAUTION



Do not remove the cap from the hydraulic tank or reservoir while the log splitter is running. Hot oil under pressure could be expelled resulting in serious injury.

Should it become necessary to loosen or remove any hydraulic fitting or line, be sure to relieve all hydraulic pressure by shutting off the engine, removing spark plug wire, and moving the valve control handle back and forth several times until no cylinder movement is visible.

Engine Service

Refer to the engine manufacturers' manual for engine maintenance and repair.

Storage

Refer to the engine manufacturers' manual for engine storage. No special procedures are required for the hydraulic system to store the log splitter.

Start-up Procedure

Important Notice

Do not start the engine. Follow all the instructions in the "Start-up Procedure" before operating the log splitter. Failure to follow this recommendation will result in engine and hydraulic pump damage.

If this log splitter is purchased without an engine, the customer assumes all liabilities that might arise from an engine that is incompatible with the design of the log splitter. Also any unauthorized changes or modifications to the log splitter will void all warranties.

IMPORTANT: Before starting the engine, read the engine manufacturer's operating and maintenance instruction manual. If an engine manual was not supplied with the log splitter, it is your responsibility to obtain a manual. Start by contacting the store where you purchased the log splitter. If they cannot help you, contact the engine manufacturer.

1. Fill the hydraulic tank with 9 gallons of SAE 10W tractor hydraulic oil or automatic transmission fluid such as Dextron III. The tank is full when the oil level is one inch from the top of the tank. Do not tighten the fill cap at this time.
2. Fill the engine's crank case with the engine manufacturer's recommended oil.
3. Lubricate the surface of slide rail with grease. This will help to prevent wear between the slide plates and the slide rail.
4. Remove the spark plug wire from the engine. This prevents the engine from starting until the hydraulic pump and cylinder are completely filled with oil. Make sure the spark plug wire is held away from the spark plug with string or other nonconductive material.
5. Push the valve control handle to the forward position (towards the front of the cylinder) with one hand and pull the engine starter cord (about 15 times) with the other hand until the cylinder piston moves forward. (Keep everything away from the splitting wedge during this step.)

NOTE: Extending the cylinder piston draws the hydraulic fluid through the system and expels any trapped air in the system.

Important Notice

If your log splitter is equipped with a factory installed engine, do not mix oil with the gasoline. Using mixed oil/gasoline in a four cycle engine can cause engine damage.

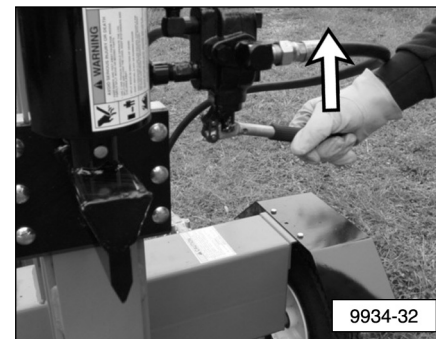
WARNING



Be careful not to spill fuel when filling the engine. If fuel should spill, quickly wipe off and allow the excess fuel to evaporate before continuing. Fuel and fuel vapors are highly flammable and can cause personal injury or even death when ignited.

6. Fill the engine's fuel tank with fresh, clean, lead-free automotive gasoline.
7. Attach the spark plug wire and start the engine per the manufacturer's instructions.
8. With the engine running, cycle the log splitter several times.
9. Push the valve control handle to the retract position and retract the cylinder piston. The cylinder valve will automatically stop the cylinder from retracting when it reaches the end of its stroke.
10. Check the fluid level in the hydraulic tank and add oil as needed. Replace and tighten the fill cap.
11. Your log splitter is now ready to use.

- g. Once the wedge reaches its full downward travel, pull up on the control lever to the full retract position. The splitting wedge will automatically retract. It is not necessary to hold the control lever as the cylinder retracts. When the cylinder is fully retracted, the control valve will automatically shift to a neutral position.



- h. **DO NOT** load another log or remove split pieces until the wedge has completely stopped and the control handle automatically returns to the neutral position.

⚠ CAUTION



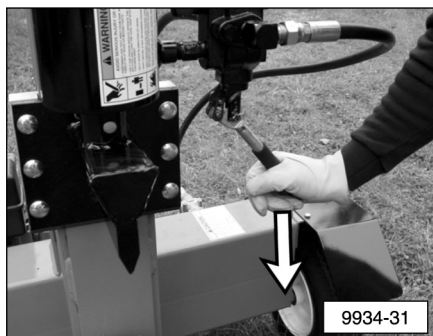
If you find you must hold the log until the wedge touches it and holds it in place, be very careful not to put your hand on top of the log. If you must, hold the log in the middle of the block. Remove your hand immediately when the wedge engages the log. Never use your hip or any extension device to operate the valve control handle.



- e. Only using your hand, push the control lever down (towards the log). If the log moves before it is contacted by the splitting wedge release the control lever and then reposition the log. Operate the log splitter only when standing in the area shown in the picture.



- f. Hold the control lever, extending the splitting wedge, until the log is split or the cylinder rod stops at its maximum travel position. As the log is being split, DO NOT reach forward and attempt to catch the split wood — let it fall to the ground.



Towing

1. Position the hitch on log splitter over or onto the tow vehicle's tow ball. In some cases the hitch may not totally engage with the ball without raising the front leg of the log splitter.



2. Raise the front leg to the towing position by pulling the spring pin. If not already secure, make sure the hitch on the log splitter is properly and securely attached to the ball.



3. Attach the towing safety chains to the tow vehicle.



Operation

WARNING



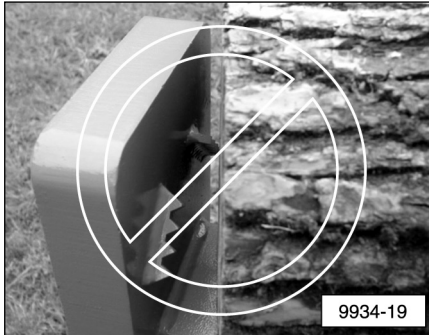
Do not attempt to operate the log splitter without fully understanding all our instructions, safety precautions, and/or warnings. If any doubt or question arises about the correct or safe method of performing anything found in this or other Brave Products' manuals, contact your Brave Products' dealer or call the Sales and Service representatives at our main headquarters. Proper care is your responsibility.

When operating the log splitter make sure you are standing in the safe operating zone as shown in these pictures. You must stay in the safe operating zone at all times when the splitting wedge is in motion (whether extending or retracting). Never place any part of your body into a position which would cause an unsafe operating condition.



1. Set your log splitter on flat, dry ground. Make sure you read all the recommendations from the "Safety" section before using the log splitter.

2. Make sure both ends of the log you are splitting are cut as square as possible. This will prevent the log from sliding out of position while under pressure. All logs should be 24 inches long or shorter.



3. Start the engine using the instructions from the engine manual. Warm up the engine and hydraulic system by running the engine at half throttle for 3 to 4 minutes, then advance the engine throttle control to maximum speed.

c. Lock the rail assembly into a vertical position with the rail latch.



d. Move the log under the splitting wedge keeping your hands on the sides of the log near the middle of the block. Center the log making sure that the sawed end is sitting on the large plate (base plate).



CAUTION



Do not place your hands on top of the log when loading the log splitter. This is a very **UNSAFE** method and could result in injury to your hands.



5. Operating the log splitter in a vertical position.

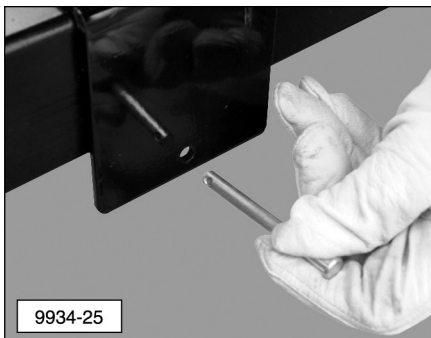
Use the following photos for the correct and incorrect methods of splitting logs. Never split a log using an incorrect or unsafe method.

⚠ WARNING



Before loading and operating the log splitter, always wear protective gear such as safety goggles, face shield, hearing protection, tight-fitting gloves without draw strings or loose cuffs, and steel-toed shoes.

- a. To operate the log splitter in a vertical position, remove the hair pin clip and clevis pin.



- b. Block the wheels and stand the rail assembly up into a vertical position.



⚠ WARNING



Before loading and operating the log splitter, always wear protective gear such as safety goggles, face shield, hearing protection, tight-fitting gloves without draw strings or loose cuffs, and steel-toed shoes.

4. Operating the log splitter in a horizontal position.

Use the following photos for the correct and incorrect methods of splitting logs. Never split a log using an incorrect or unsafe method.

- a. Place the log on the log splitter. Grasp the log on the sides near the middle of the block. Center the log, side-to-side, on the rail of the log splitter making sure that the sawed end is against the large plate (base plate) at the opposite end from the hydraulic control valve control lever.



⚠ CAUTION



Do not place your hands on the ends of the log when loading the log splitter. This is a very UNSAFE method and could result in injury to your hands.



- b. Only using your hand, push the control lever forward (towards the log). If the log moves before it is contacted by the splitting wedge release the control lever and then reposition the log. Operate the log splitter only when standing in the safe operating area shown in the picture.



⚠ CAUTION



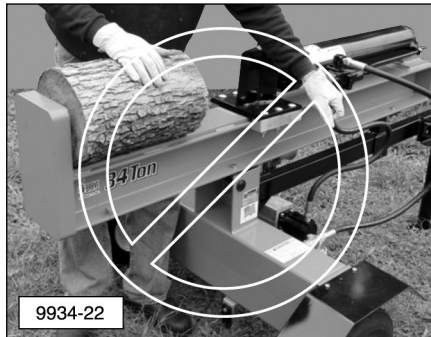
If you find you must hold the log until the wedge touches it and holds it in place, be very careful not to put your hand between the log and the end plate or the log and the wedge. If you must, hold the log on top and in the middle. Remove your hand immediately when the splitting wedge engages the log. Never use your hip or any extension device to operate the valve control handle.



⚠ WARNING



Do not operate the log splitter by reaching across the rail. This is a very UNSAFE method which could cause personal injury or even death.

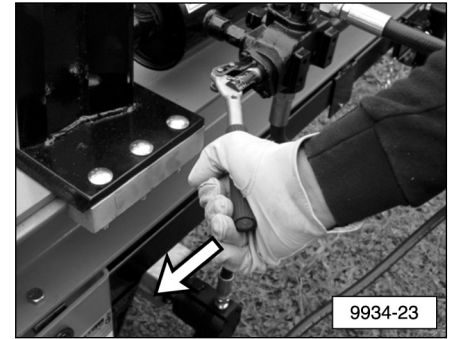


⚠ WARNING

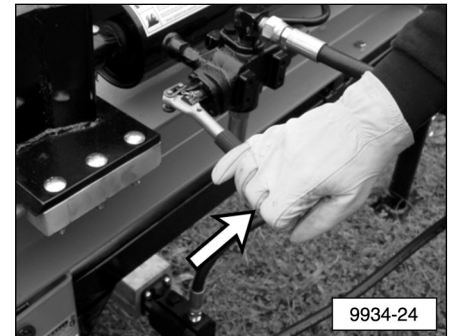


Do not reach across or step across the rail while the log splitter is running. This is a very UNSAFE method which could cause personal injury or even death.

- c. Hold the control lever, extending the splitting wedge, until the log is split or the cylinder rod stops at its maximum travel position. As the log is being split, DO NOT reach forward and attempt to catch the split wood — let it fall to the ground.



- d. Once the wedge reaches its full forward travel, pull back on the control lever to the full retract position. The ram of the cylinder will automatically retract into the cylinder. It is not necessary to hold the control lever as the cylinder retracts. When the cylinder is fully retracted, the control valve will automatically shift to a neutral position.



- e. DO NOT load another log or remove split pieces until the wedge has completely stopped and the control handle automatically returns to the neutral position.